AMENDMENT AND LISTING OF CLAIMS

Claim 1 (currently amended). A method of removing more quickly non-cyclic adenine nucleotides consisting of endogenous ATP, ADP and AMP, and endogenous glucose-6-phosphate in a biological sample which comprises treating said sample with effective amounts of apyrase, alkaline phosphatase and adenosine deaminase without 5'-nucleotidase to remove said non-cyclic adenine nucleotide and glucose-6-phosphate.

Claim 2 (currently amended). A method of determining cAMP content or an adenylate cyclase activity in a biological sample comprising the following steps:

Cleaning Reaction: combining a biological sample with effective amounts of apyrase, alkaline phosphatase and adenosine deaminase without 5'-nucleotidase to remove non-cyclic adenine nucleotides consisting of endogenous ATP, ADP and AMP, and endogenous glucose-6-phosphate;

Converting Reaction: enzymatically converting cAMP in the biological sample into AMP; and

Detecting Reaction: determining an amount of AMP without the use of radioactive agents.

Claim 3 (currently amended). The method according to claim 2 wherein, further comprising, in said Cleaning Reaction, combining said biological sample with effective amounts of glucose oxidase ~~oxydase~~, glycogen phosphorylase and alkaline phosphatase so as to enzymatically remove endogenous glycogen from said biological sample.

Claim 4 (Original). The method according to claim 2 wherein said Converting Reaction is carried out by combining said biological sample with an effective amount of phosphodiesterase.

Claim 5 (Original). The method according to claim 2 wherein an enzyme used in said Converting Reaction of cAMP into AMP is deactivated by a chelating agent after conversion to AMP.

Claim 6 (Original). The method according to claim 5 wherein said chelating agent is EDTA.

Claim 7 (Original). The method according to claim 2 wherein said Detecting Reaction comprises conversion from glycogen to glucose-1-phosphate by contacting glycogen phosphorylase with glycogen in the presence of inorganic phosphoric acid added to said sample and said conversion is activated in *in vitro* by said AMP.

Claim 8 (Original). The method according to claim 7 wherein said Detecting Reaction further comprises combining said sample with an effective amount of phosphoglucomutase to convert glucose-1-phosphate into glucose-6-phosphate and then combining said sample with effective amounts of glucose-6-phosphate dehydrogenase to convert glucose-6-phosphate into 6-phosphogluconolactone and $NADP^+$ so as to convert glucose-1-phosphate into 6-phosphogluconolactone and NADPH.

Claim 9 (Original). The method according to claim 8 wherein said Detecting Reaction further comprises heating up said sample in the presence of water to convert 6-phosphogluconolactone into 6-phosphogluconate and then combining the sample with an effective amount of $NADP^+$ to convert 6-phosphogluconate into ribulose-5-phosphate and NADPH.

Claims 10-22 (Currently canceled).